UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/917,522	07/27/2001	Alexander J. Neudeck	10002438-1	1195

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EXAMINER
MASKULINSKI, MICHAEL C

ART UNIT	PAPER NUMBER
2113	

DATE MAILED: 06/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/917,522	NEUDECK, ALEXANDER J.
	Examiner	Art Unit	
	Michael C Maskulinski	2113	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _27 July 2001_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-46_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-10,15,17-23,28,29,33-42 and 46_ is/are rejected.

7)☒ Claim(s) _11-14,16,24-27,30-32 and 43-45_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _27 July 2001_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Non-Final Office Action

Double Patenting

1.   Applicant is advised that should claim 5 be found allowable, claim 6 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

2.   Applicant is advised that should claim 37 be found allowable, claim 38 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4.   Claims 1-10, 15, 17-23, 28-29, 33-42, and 46 are rejected under 35

U.S.C. 102(e) as being anticipated by Adams, U.S. Patent 6,401,222 B1.

Referring to claims 1 and 33, in column 7, lines 25-26, Adams discloses that the

interposer first tests whether an operation requested is a floppy diskette write operation

(detecting whether a floppy disk operation is a write). In column 9, lines 55-61, Adams

discloses that on the last byte being transferred, the data byte may be delayed by either

activating a higher priority DMA channel or masking the DMA channel of the FDC

(masking DMA requests from at least one DMA channel during said write thereby

preventing data corruption).

Referring to claims 2 and 34, in column 9, lines 55-61, Adams discloses that on

the last byte being transferred, the data byte may be delayed by either activating a

higher priority DMA channel or masking the DMA channel of the FDC (said masking

DMA requests is only during a portion of said write).

Referring to claims 3 and 35, in column 7, lines 37-48, Adams discloses delaying

the DMA transfer of the last byte of the sector transfer (said masking DMA requests is

during all of said write).

Referring to claims 4 and 36, in column 7, lines 22-25, Adams discloses that the

interposer routine is actually a new or modified device driver that forces certain

undetected FDC data corruption conditions to exist (said detecting and said masking is

accomplished by said floppy disk driver routine).

Referring to claims 5, 6, 37, and 38, in column 8, lines 59-61, Adams discloses

that a timer ISR routine is used for servicing the accelerated interrupt rate of the system

clock (said masking is accomplished by a timer interrupt service routine).

Referring to claims 7 and 39, in column 7, lines 34-36, Adams discloses

reprogramming the timer to interrupt faster than normal (reprogramming a timer to

interrupt at a more rapid rate).

Referring to claims 8 and 40, in column 7, lines 40-41, Adams discloses reading

the current byte count (reading a DMA byte count).

Referring to claims 9 and 41, in column 7, lines 37-48, Adams discloses that

when a test shows that a current DMA transfer count has reached 0, then the interposer

routine delays the DMA transfer of the last byte of the sector transfer (accomplishing

said masking after said DMA byte count reaches a threshold).

Referring to claims 10 and 42, in column 7, lines 45-48, Adams discloses that he

delay continues until a test determines that the elapsed time is greater than the

maximum time required for a data byte to be transferred to the medium (e.g. a low-

density diskette; >32 uSec) (estimating when said write will complete from said DMA

byte count).

Referring to claim 15, in column 7, lines 6-17, Adams discloses that the DMA

controller manages data transfers between the floppy diskette controller and the main

memory device (a floppy disk controller receiving data via DMA accesses under the

control of a DMA controller). Further, in column 7, lines 37-48, Adams discloses that

the delay continues until a test determines that the elapsed time is greater than the

maximum time required for a data byte to be transferred to the medium (wherein said

DMA controller ignores at least one DMA request line when an underrun error may

occur).

Referring to claim 17, in column 9, lines 55-61, Adams discloses that the last

byte being transferred may be delayed (said DMA controller ignores said at least one

DMA request line for a transfer of data comprising less than a whole sector).

Referring to claim 18, in column 7, lines 42-45, Adams discloses that when a test

shows that a current DMA transfer count has reached 0, then the interposer routine

delays the DMA transfer of the last byte of the sector transfer (said DMA controller

ignores said at least one DMA request line after a threshold number of bytes have been

transferred).

Referring to claim 19, in column 8, lines 26-28, Adams discloses that once the

test indicates that the byte counter has reached the last byte, the signal transition from

DREQ to DACK may be timed and accordingly delayed (said DMA controller ignores

said at least one DMA request line after a first time period has elapsed).

Referring to claim 20, in column 8, lines 26-28, Adams discloses that once the

test indicates that the byte counter has reached the last byte, the signal transition from

DREQ to DACK may be timed and accordingly delayed (said DMA controller ignores

said at least one DMA request line a second time period before a transfer of a last byte).

Referring to claim 21, in column 8, lines 28-30, Adams discloses that the time

may be greater than the maximum time required to transfer one data byte (said second

time period is based upon an estimate of when said transfer of said last byte will occur).

Referring to claim 22, in column 7, lines 40-45, Adams discloses that the current

byte count is read and DMA shadowing begins. When a test shows that a current DMA

transfer count has reached 0, then the interposer routine delays the DMA transfer of the

last byte of the sector transfer (said estimate is derived by monitoring a DMA byte

count).

Referring to claim 23, in column 9, lines 22-25, Adams discloses that it is

desirable to have an interrupt (the system clock) that will interrupt close to the end of the

sector transfer so that the DREQ to DACK timing may be determined on the last byte of

the sector transfer (said estimate is derived by monitoring a system clock).

Referring to claim 28, in column 7, lines 6-17, Adams discloses that the DMA

controller manages data transfers between the floppy diskette controller and the main

memory device (a floppy disk controller receiving data via DMA accesses under the

control of a DMA controller). Further, in column 7, lines 37-48, Adams discloses that

the delay continues until a test determines that the elapsed time is greater than the

maximum time required for a data byte to be transferred to the medium (wherein said

DMA controller ignores at least one DMA request line when an underrun error may

occur). Further, in column 1, lines 51-67, Adams teaches underrun occurring due to an

improperly designed floppy disk controller.

Referring to claims 29 and 46, in column 7, lines 45-48, Adams discloses that he

delay continues until a test determines that the elapsed time is greater than the

maximum time required for a data byte to be transferred to the medium (e.g. a low-

density diskette; >32 uSec) (at least one DMA request line is masked based upon an

estimate generated by a means for estimating).

Allowable Subject Matter

5.   Claims 11-14, 16, 24-27, 30-32, and 43-45 are objected to as being dependent

upon a rejected base claim, but would be allowable if rewritten in independent form

including all of the limitations of the base claim and any intervening claims.

Conclusion

6.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

U.S. Patent 5,379,414	Adams
U.S. Patent 5,423,029	Schieve
U.S. Patent 5,790,869	Melo et al.
U.S. Patent 5,983,002	Adams
US 2002/0046367 A1	Yang

The Examiner notes that although Yang was filed after Applicant's Application,

the subject matter is closely related to the Applicant's invention.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Michael C Maskulinski whose telephone number is (703)

308-6674. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Robert W Beausoliel can be reached on (703) 305-9713. The fax phone

number for the organization where this application or proceeding is assigned is 703-

872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

MM

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